

## WORK-RELATED CARDIOVASCULAR DISEASES

### WHAT IS THE PUBLIC HEALTH ISSUE?

- An estimated 59.7 million Americans have cardiovascular (heart) disease, which is the leading cause of death for both women and men in the United States.
- Cardiovascular disease rates vary substantially among occupational groups. Men have a 9-fold difference between high- and low-risk occupations, and women have a 5-fold difference.
- Prevalence of certain factors (e.g., job stress, shift work, persistently long work hours) may contribute to the development of heart disease. Environmental tobacco smoke also may contribute to heart disease, particularly in occupations with high exposure.
- More than 9 million Americans are exposed to high levels of noise at work, causing an elevated blood pressure for a short period of time. These individuals are at risk for developing chronically high blood pressure, which is one of the leading risk factors for cardiovascular diseases.

### WHAT HAS CDC ACCOMPLISHED?

CDC has conducted preliminary research to evaluate the role of occupational factors in cardiovascular diseases and has inaugurated research and public health activities to improve employer protections for workers exposed to potential risk factors.

#### *Examples of Program in Action*

- Conducted a study of heart disease and job stress. The study found that increased job control, which can reduce job stress, was associated with lower incidence of ischemic heart disease.
- Performed a study of shift work and heart disease among blue-collar workers. The study found no relationship between non-rotating shift work and the risk of heart disease.
- Conducted an analysis of studies that examined the association between occupational exposure to environmental tobacco smoke and heart disease. These studies indicated an increased risk of heart disease of about 20% to 30% among exposed workers, resulting in 1,710 deaths annually among workers 35 to 69 years of age.

### WHAT ARE THE NEXT STEPS?

CDC is conducting three studies to provide more definitive findings on the role of occupational factors in cardiovascular disease. CDC is conducting a 5-year prospective study of 20,000 men and women that will evaluate the relationship between job stress and both cardiovascular disease and hypertension while accounting for leading risk factors (e.g., smoking). CDC is also performing a 3-year prospective study of workers that will evaluate the relationship between noise and blood pressure. Finally, CDC is analyzing data from the third National Health and Nutrition Examination Survey and the O\*NET system to examine relationships between specific occupational variables and symptoms of heart disease.